

Letter to the editor: “Classification of open tibia fractures: the rationale for a new classification system”

Alex Trompeter, PhD^a, Hugh Furness, MBBS^b, Nikolaos Kanakaris, PhD^c, Edward Tozer, MBBS^{d,*}, Matthew Costa, PhD^e

Dear Editor of *Orthopaedic Trauma Association International*,

We read with great interest the recent publication of “Classification of open tibia fractures: the rationale for a new classification system” by Ferati and Ganta¹ in your June 2024 issue. We appreciate the flaws identified in the Gustilo-Anderson, OTA/AO, and Ganga classification systems and the authors’ conclusion that a new objective classification system is needed to reduce intraobserver variability and predict functional patient-centered outcomes.

We note the similarities with another review article “Classification of open fractures: the need to modernize” by Trompeter et al² in *The Bone and Joint Journal* from November 2020. Ferati and Ganta fail to acknowledge the new classification system proposed by the Orthopaedic Trauma Society—the Orthopaedic Trauma Society (OTS) classification of open fractures.³ Following our review, this group developed the OTS system, which classifies fractures as either simple, where wound closure is possible after simple primary debridement, or complex, where reconstructive surgery is required. Complex fractures are further subdivided into 3 categories: A) requiring bone shortening or deformation, B) requiring soft tissue reconstruction, and C) requiring vascular repair.

Unlike the systems before it, the OTS system is based on objective assessment and has been shown to correlate with functional, patient-centered outcomes in National Health Service (NHS) adults with open fractures of the lower limb.⁴ Furthermore, the OTS system demonstrated statistically significant differences in the costs associated with simple versus complex open fractures of the lower limb in adult NHS patients.⁵ While

further studies are needed to test intraobserver variability and validate the system in other patient cohorts and health care systems, the OTS system provides strong evidence for its use in open lower limb fractures—the focus of Ferati and Ganta’s review.

The authors of this letter consider it a significant oversight for Ferati and Ganta not to include this emerging classification system in their review article, given its objectivity and the demonstrated correlation with functional outcomes and economic costs for adult open fractures of the lower limb.

Acknowledgments

The authors would like to acknowledge the Orthopaedic Trauma Society for the development of the OTS classification system.

References

1. Ferati SR, Ganta A. Classification of open tibia fractures: the rationale for a new classification system. *OTA Int.* 2024;7:e318.
2. Trompeter AJ, Furness H, Kanakaris NK, et al. Classification of open fractures: the need to modernize. *Bone Joint J.* 2020;102-B: 1431–1434.
3. Trompeter A, Knight R, Parsons N, et al. Infographic: the Orthopaedic Trauma Society classification of open fractures. *Bone Joint J.* 2020;102-B: 1467–1468.
4. Trompeter AJ, Knight R, Parsons N, et al. The Orthopaedic Trauma Society classification of open fractures. *Bone Joint J.* 2020;102-B: 1469–1474.
5. Png ME, Petrou S, Bourget-Murray J, et al. Association between the Orthopaedic Trauma Society classification of open fractures and economic costs. *Bone Joint J.* 2022;104-B:408–412.

All authors declare no potential conflicts of interest related to this work over the past 3 years.

^a Orthopaedic Trauma/Limb Reconstruction Unit, St George’s University Hospital, London, United Kingdom, ^b Cambridge University Hospitals (CUH) NHS Trust, Cambridge, United Kingdom, ^c Major Trauma Centre, Leeds Teaching Hospitals NHS Trust, Leeds, United Kingdom, ^d University Hospitals Sussex NHS Trust, Worthing, Brighton, United Kingdom, ^e Oxford Trauma and Emergency Care, Nuffield Department of Orthopaedics, Rheumatology and Musculoskeletal Sciences, University of Oxford, Oxford, United Kingdom.

* Corresponding author. Address: University Hospitals Sussex NHS Trust, Dr Edward Tozer, 7 Heather Lane, Worthing, West Sussex, BN13 3BU, United Kingdom. E-mail address: edward.tozer@nhs.net (E. Tozer).

Article processing charge (APC) for this manuscript is being covered by the Orthopaedic Trauma Association (OTA).

Copyright © 2025 The Authors. Published by Wolters Kluwer Health, Inc. on behalf of the Orthopaedic Trauma Association.

This is an open access article distributed under the terms of the Creative Commons Attribution-Non Commercial-No Derivatives License 4.0 (CCBY-NC-ND), where it is permissible to download and share the work provided it is properly cited. The work cannot be changed in any way or used commercially without permission from the journal.

OTAI (2025) e405

Received: 15 November 2024 / Accepted: 26 November 2024

Published online 26 June 2025

<http://dx.doi.org/10.1097/OI9.0000000000000405>